

REMARKS

Upon entry of the foregoing amendments and the following remarks, the Examiner is requested to withdraw the rejection and allow claims 1-18, 23, 25-26, 29 and 31, the only claims pending and currently under examination in this application. Accordingly, no new matter has been added.

REJECTION UNDER 35 U.S.C. § 103(a)

Claims 1-18, 23, 25, 26, 29 and 31 have been rejected under 35 U.S.C. § 103 (a) as being unpatentable over Suzuki et al., US Patent No. 5,972,438 ("Suzuki") in view of Ziolo et al., US Patent No. 5,972,438 ("Ziolo").

According to MPEP 2143, the Office in attempting to establish a *prima facie* case of obviousness must articulate a finding that the prior art included each element claimed, although not necessarily in a single prior art reference, with the only difference between the claimed invention and the prior art being the lack of actual combination of the elements in a single prior art reference.

The claims are directed to methods of identifying an object, a tag carrying such identification information, an object carrying such a tag, and a system for object identification. Independent claims 1, 23, 25, 29, and 31 each include the element of a tag. The tag includes a host material. The host material is at least substantially non-magnetic and includes a disordered plurality of pores wherein at least some of the disordered plurality of pores of the host material have been filled with a magnetic material. As set forth below, Applicants submit that the Office has failed to establish a *prima facie* case of obviousness because the combined teachings of Suzuki in view of Ziolo fail to teach or suggest the claimed invention.

According to the Office Action, to support the conclusion that the rejected claims are directed to obvious subject matter, the Office alleges that Suzuki teaches a host material having grooves to embed magnetic material. The Office, however, acknowledges that Suzuki does not explicitly teach *disordered pores* to embed the magnetic material. The Office, therefore relies on Ziolo for this teaching. The Office alleges that Ziolo teaches using a plurality of disordered

pores to embed magnetic material. Therefore, the Office concludes: “at the time of invention, it would have been obvious to one skilled in the art to use the disordered pores in the non-magnetic substrate, as taught by Ziolo as the substrate for Suzuki’s magnetic cards, so as to embed the magnetic material” (Office Action, p. 3 and 4). The Applicants respectfully traverse the rejection.

The Applicants maintain that a combination of these references does not produce the claimed element of a tag that comprises at least a substantially non-magnetic host material having a disordered plurality of pores, wherein at least some of the disordered plurality of pores of the host material have been filled with a magnetic material.

Ziolo teaches a process for preparing magnetically-responsive, low density, electrostatographic composite carrier particles for use in magnetic brush type development of electrostatic latent images. According to the disclosure, Ziolo’s methods require encasing low density siliceous particles in a sheath of a high purity magnetic or magnetically attractable metal or metal oxide to provide electrostatographic carrier particles. (col. 3, lines 61-65)

In making the rejection, the Office alleges that Ziolo teaches a substrate containing disordered pores intended to embed magnetic material as shown in col. 4 line 57 to col. 5 line 55. The Applicants submit that in col. 5 line 3 to 8, Ziolo also teaches that the siliceous substrates are for example glass particles in various forms such as hollow glass beads, foam glass nodules, solid glass beads, microporous glass beads, glass chips, ceramic beads, sand and porcelain, in addition vitreous materials may also be used. These particles are covered with magnetic material and further over coated with an insulating resinous material (See col. 6, lines 28-31).

Thus, Ziolo teaches the use of very small glass or ceramic chips, nodules or beads that are siliceous in composition and coated with a metal or metal oxide. As such, the individual beads form low density magnetic carrier particles.

At no point in time does Ziolo teach or suggest the use of the disclosed metal covered beads as a tag. As set forth above, an element of the rejected claims is a tag comprised of a porous host material wherein at least some of the pores include a magnetic material. In this context, a “Tag” is referred to in the Merriam-Webster online dictionary (See the enclosed

excerpt of www.m-w.com, <http://www.merriam-webster.com/dictionary/tag>, provided herein as Exhibit A), as “a piece of hanging or attached material; a cardboard, plastic, or metal marker used for identification or classification or a descriptive or identifying epithet or something used for identification or location”, meaning as a “non particulate material”. Likewise, Webster’s Encyclopedia Unabridged Dictionary of the English Language, edition 1997, page 1447 (copy attached herein as Exhibit B) defines a “tag” as a “bulk” or non particulate material, namely as a piece or a strip of strong paper, leather, or the like for attaching by one end to something as a mark or label.

Accordingly, the metal coated siliceous particle disclosed in Ziolo are not employed for identifying an object and are therefore not employed as a tag. In other words, the present claims do not use a particulate material such as that discussed in Ziolo as a substrate whatsoever, and further do not use such particulate matter as a tag. See, for example original claim 25, which is directed to a tag carrying identification information, said tag comprising:

a host material having a disordered plurality of pores, said host material being at least substantially non-magnetic, wherein at least some of the disordered plurality of pores of the host material have been filled with a magnetic material, and

at least one coating layer covering at least partially a surface of the host material.

The pores of the “non-particulate” host material of the tag as described in the present application may be created in host materials such as alumina, zeolite and other materials for example as described in paragraphs [0033] to [0037] of the present application. Also, Figures 1 to 3A illustrate that the host material is not a particulate material but instead a porous (bulk) material and Figure 4 exemplifies a flow diagram of a method of manufacturing a tag for use in the present invention.

As such, unlike the present invention, Ziolo teaches carrier particles suitable for use in magnetic brushes having particulate substrates coated or impregnated with magnetic material (see col. 3 lines 61 to col. 4 line 10). Specifically, Ziolo does not teach or suggest a tag comprising a porous host material wherein at least some of the pores include magnetic material.

Therefore, Ziolo teaches only particulate low density material for use in magnetic brushes and in no way teaches or even suggests the use of porous host material as a tag as recited in the present claims. Thus, Ziolo fails to each and every element of the present claims, in particular, the reference fails to teach a tag as recited in the instant claims.

The Suzuki reference fails to remedy this deficiency of Ziolo in that it too fails to teach a tag as recited in the present claims. Rather, the Suzuki reference discloses a recording medium and not a tag. The Office alleges that the recording medium includes a host material having a disordered plurality of pores in which the host material is at least substantially non-magnetic and wherein at least some of the disordered plurality of pores of the host material have been filled with a magnetic material as recited in the instant claims.

The Applicants disagree and contend that Suzuki discloses a magnetic recording medium that is a magnetic card such as a shopping card, credit card, pre-paid card, identification card, birth certificate, passport etc. Identification information (proprietary information) is recorded and stored on a magnetic stripe member that is formed of a first magnetic layer, a second magnetic layer and a protective covering layer. The magnetic stripe member is embedded in a groove. The coding information is formed by a plurality of protrusions formed in the magnetic layer by different concentrations of magnetic particles (See col. 2, lines 27 to 34). Therefore, the recorded coding information is fixated on the recording medium in an orderly designed pattern, letter, numeral or bar code which is non erasable and non alterable. It is precisely this orderly recorded coding information that forms the identification information.

This is in contrast to the present claims in which a magnetic signal is obtained from magnetic material contained in the disordered pores of the host material of a tag. This signal is determined and stored as the identification information. The identification information, which is a characteristic of the magnetic signal, is dependent on the disorder due to a feature such as pore size, shape, orientation of pores, percentage of pore filling, crystal orientation of magnetic material in the tag and combination thereof.

Therefore, Suzuki fails to teach or suggest using a magnetic signal obtained from magnetic material contained in disordered pores of the host material of a tag as identification

information. Thus, the presently claimed subject matter is not rendered obvious by Suzuki because the reference fails to teach or suggest each and every element of the instant claims, namely, a tag that comprises a host material having a disordered plurality of pores in which the host material is at least substantially non-magnetic and wherein at least some of the disordered plurality of pores of the host material have been filled with a magnetic material.

In addition, based on the above, Applicants contend that neither Suzuki nor Ziolo provide any motivation to a person skilled in the art to combine the teachings of Suzuki and Ziolo.

Applicants contend that it would not be obvious to one of skill in the art to modify the teachings of Suzuki to include a tag comprising a disordered plurality of pores of host material filled with a magnetic material because Suzuki specifically requires ordered information to be prerecorded onto a magnetic coding layer. In fact, according to Suzuki's disclosure, the recording medium includes a coding layer in which the coding information is *specifically* formed by a plurality of *specific* protrusions comprising "designed patterns, letters or bar-code type patterns, which protrude from the coding layer towards the base material" (col. 2, lines 47-49). Moreover, Suzuki provides several exemplary methods of forming and fixating the specific coding information, such as with an electromagnet (col. 7, lines 4-11), a permanent magnet as a roll (Figure 7 and col. 7, lines 17-18), an assembled roll type magnet which includes numerical patterns (Figure 8, col. 7, lines 19-20). As such, Suzuki's methods first require the specific encoding of ordered information which is then fixated onto the magnetic coding layer to ensure that the information remains in the exact and particular order/pattern.

From reading Suzuki's disclosure, the skilled artisan would incorporate coded identification information which is highly specific and provided in a pre-designed ordered format, e.g., barcodes, numerical patterns, or alphabetic patterns into the recording medium. However, it would not be obvious to one of skill in the art to modify Suzuki to employ a tag that comprises a *disordered* plurality of pores of host material filled with a magnetic material as in the present claims because Suzuki only uses identification provided in a specific *ordered* format.

Additionally, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the results would have been predictable to one ordinary

skill in the art. *See* MPEP §2143.01, citing *KSR International Co. v. Teleflex Inc.*, 550 U.S. ___, 82 USPQ2d 1385, 1396 (2007). Furthermore, a statement that modifications of the prior art to meet the claimed invention would have been “well within the ordinary skill of the art at the time the claimed invention was made” because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *See* MPEP §2143.01, citing *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993).

There is no objective reason provided by the Suzuki and Ziolo references, alone or in combination, that would lead the skilled artisan to combine these references, nor is there any evidence that the resultant combination of these references would have been predictable. Moreover, these references fail to provide the skilled artisan with a reasonable expectation that the methods recited by the claims presented herein would successfully identify an object having identification information by employing a tag that comprises a host material having a disordered plurality of pores in which the host material is at least substantially non-magnetic and wherein at least some of the disordered plurality of pores of the host material have been filled with a magnetic material as recited in the present claims.

As such, none of the references cited by the Examiner describe a tag that comprises a host material having a disordered plurality of pores in which the host material is at least substantially non-magnetic and wherein at least some of the disordered plurality of pores of the host material have been filled with a magnetic material. Those of ordinary skill in the art at the time of the instant invention would have recognized the difficulty in predicting that a host material having a disordered plurality of pores in which the host material is at least substantially non-magnetic and wherein at least some of the disordered plurality of pores of the host material have been filled with a magnetic material could be used as a tag for object identification. Thus, any suggestion that it would have been obvious to use a tag that comprises a host material having a disordered plurality of pores in which the host material is at least substantially non-magnetic and wherein at least some of the disordered plurality of pores of the host material have been

filled with a magnetic material recited by the claims presented herein is an improper application of hindsight based on Applicants' disclosure in the instant application.


Therefore, the Applicants submit that it would not have been obvious for a person skilled in the art to arrive at a tag as claimed in the present invention by combining the teachings of Suzuki and Ziolo. Ziolo's substrates are particulate and are directed for use in a mixture comprising toner particles and employed to develop electrostatic latent images. This in no way motivates a person skilled in the art to use the substrate particles having magnetic material coated or impregnated as tags for identifying an object of the present invention. In view of the above observation, the Applicants contend that Suzuki and Ziolo do not motivate a person skilled in the art to arrive at the present invention. Thus, Applicants submit that the Examiner has failed to establish a *prima facie* case of obviousness and request that this rejection be withdrawn.

CONCLUSION

On the basis of the foregoing remarks, Applicants respectfully submit that the pending claims are in condition for allowance.

Please charge any fees due or credit any overpayment to the undersigned's Deposit Account No. 18-0580, Reference No. 79030-0001.

Respectfully submitted,

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